

REMARKS

I. Status of the Claims

Claims 1-21 are pending. Claims 1, 4, 6, 13, 17, 19, and 20 are amended in this response. Upon entry of the amendment, claims 1-21 will remain for consideration.

II. Objection to claims 19-21

The Examiner objects to claims 19-21 because they are drawn to an activator rather than a catalyst or component of a catalyst system.

Applicants define clathrochelates of the type defined in claims 19-21 as "activators" because at least one of the capping atoms of the macropolycyclic ligand is a Group 13 atom, such as boron or aluminum. Applicants believe that such clathrochelates, when combined with an alkylaluminum compound, will activate olefin polymerizations (see page 8, middle structure, where Z=boron or aluminum; see also claim 6, where the clathrochelate includes two Group 13 capping atoms and is used "in combination with an olefin polymerization catalyst" to polymerize an olefin). Without a Group 3-10 metal capping atom, however, they are not likely to catalyze the polymerization. In contrast, when at least one of the capping atoms is a Group 3-10 metal (e.g., Ti or Zr), the clathrochelate can function as an olefin polymerization catalyst. Note that the transition metal *ion* encapsulated within the clathrochelate--not to be confused with the Group 3-10 metal capping atom--is an unlikely site for olefin polymerization.

III. Response to the Rejection under 35 U.S.C. § 112

Claims 1-21 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. The Examiner found insufficient antecedent basis for "capping atoms." While a skilled person would understand the term from Voloshin et al.'s definition at Chapter 1, page 1 of Clathrochelates: Synthesis, Structure and Properties, Elsevier (2002), Applicants amend claims 1, 4, 6, 13, 17, 19, and 20 anyway to better define the invention. Support for the amendment appears in the

application on page 3, third full paragraph. There, Applicants teach that the macropolycyclic ligand "has at least three macropolycyclic fragments," and that the fragments "share at least two capping atoms." The paragraph further provides that the "encapsulated metal ion coordinates five or more nitrogen, phosphorus, oxygen, or sulfur donor atoms of the macropolycyclic ligand." The text deleted from claims 1, 4, 6, 13, 17, 19, and 20 is believed to be redundant in view of the added text. Upon reconsideration, the Examiner should conclude that the amended claims meet the definiteness requirement of Section 112, paragraph 2.

IV. Conclusion

In view of the remarks above, Applicants respectfully ask the Examiner to reconsider and withdraw the objection and the rejection under 35 U.S.C. § 112 and pass the case to issue. Applicants invite the Examiner to telephone their attorney at (610) 359-2276 if he believes that a discussion of the application might be helpful.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 19, 2005.

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Respectfully submitted,
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